

#13



PCT09

RECEIVED

RAW SEQUENCE LISTING

DATE: 10/24/2002

PATENT APPLICATION: US/09/980,177A

TIME: 15:57:28

Input Set : A:\50125.036001.SEQLIST.TXT

Output Set: N:\CRF4\10242002\I980177A.raw

4 <110> APPLICANT: Jochmus, Ingrid
5 Nieland, John
7 <120> TITLE OF INVENTION: Cytotoxic T-Cell Epitopes of the
8 Papilloma Virus L1-Protein and Use Thereof in Diagnosis and
9 Therapy
11 <130> FILE REFERENCE: 50125/036001
13 <140> CURRENT APPLICATION NUMBER: US 09/980,177A
14 <141> CURRENT FILING DATE: 2001-11-29
16 <150> PRIOR APPLICATION NUMBER: PCT/EP00/05006
17 <151> PRIOR FILING DATE: 2000-05-31
19 <150> PRIOR APPLICATION NUMBER: DE 19925199.1
20 <151> PRIOR FILING DATE: 1999-06-01
22 <160> NUMBER OF SEQ ID NOS: 77
24 <170> SOFTWARE: FastSEQ for Windows Version 4.0
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 9
28 <212> TYPE: PRT
29 <213> ORGANISM: Human papillomavirus type 16
31 <400> SEQUENCE: 1
32 Ile Leu Val Pro Lys Val Ser Gly Leu
33 1 5
36 <210> SEQ ID NO: 2
37 <211> LENGTH: 9
38 <212> TYPE: PRT
39 <213> ORGANISM: Human papillomavirus type 16
41 <400> SEQUENCE: 2
42 Arg Leu Val Trp Ala Cys Val Gly Val
43 1 5
46 <210> SEQ ID NO: 3
47 <211> LENGTH: 9
48 <212> TYPE: PRT
49 <213> ORGANISM: Human papillomavirus type 16
51 <400> SEQUENCE: 3
52 His Leu Phe Asn Arg Ala Gly Thr Val
53 1 5
56 <210> SEQ ID NO: 4
57 <211> LENGTH: 9
58 <212> TYPE: PRT
59 <213> ORGANISM: Human papillomavirus type 16
61 <400> SEQUENCE: 4
62 Tyr Leu Arg Arg Glu Gln Met Phe Val
63 1 5
66 <210> SEQ ID NO: 5

RAW SEQUENCE LISTING

DATE: 10/24/2002

PATENT APPLICATION: US/09/980,177A

TIME: 15:57:28

Input Set : A:\50125.036001.SEQLIST.TXT

Output Set: N:\CRF4\10242002\I980177A.raw

```

67 <211> LENGTH: 9
68 <212> TYPE: PRT
69 <213> ORGANISM: Human papillomavirus type 16
71 <400> SEQUENCE: 5
72 Thr Leu Gln Ala Asn Lys Ser Glu Val
73 1 5
76 <210> SEQ ID NO: 6
77 <211> LENGTH: 9
78 <212> TYPE: PRT
79 <213> ORGANISM: Human papillomavirus type 16
81 <400> SEQUENCE: 6
82 Ile Leu Glu Asp Trp Asn Phe Gly Leu
83 1 5
86 <210> SEQ ID NO: 7
87 <211> LENGTH: 12
88 <212> TYPE: PRT
89 <213> ORGANISM: Human papillomavirus type 16
91 <400> SEQUENCE: 7
92 Ser Leu Trp Leu Pro Ser Glu Ala Thr Val Tyr Leu
93 1 5 10
96 <210> SEQ ID NO: 8
97 <211> LENGTH: 10
98 <212> TYPE: PRT
99 <213> ORGANISM: Human papillomavirus type 16
101 <400> SEQUENCE: 8
102 Asn Leu Ala Ser Ser Asn Tyr Phe Pro Thr
103 1 5 10
106 <210> SEQ ID NO: 9
107 <211> LENGTH: 10
108 <212> TYPE: PRT
109 <213> ORGANISM: Human papillomavirus type 16
111 <400> SEQUENCE: 9
112 Thr Leu Thr Ala Asp Val Met Thr Tyr Ile
113 1 5 10
116 <210> SEQ ID NO: 10
117 <211> LENGTH: 10
118 <212> TYPE: PRT
119 <213> ORGANISM: Human papillomavirus type 16
121 <400> SEQUENCE: 10
122 Tyr Leu Pro Pro Val Pro Val Ser Lys Val
123 1 5 10
126 <210> SEQ ID NO: 11
127 <211> LENGTH: 9
128 <212> TYPE: PRT
129 <213> ORGANISM: Human papillomavirus type 16
131 <400> SEQUENCE: 11
132 Tyr Asp Leu Gln Phe Ile Phe Gln Leu
133 1 5
136 <210> SEQ ID NO: 12

```

RAW SEQUENCE LISTING

DATE: 10/24/2002

PATENT APPLICATION: US/09/980,177A

TIME: 15:57:28

Input Set : A:\50125.036001.SEQLIST.TXT

Output Set: N:\CRF4\10242002\I980177A.raw

```

137 <211> LENGTH: 9
138 <212> TYPE: PRT
139 <213> ORGANISM: Human papillomavirus type 16
141 <400> SEQUENCE: 12
142 Ile Cys Trp Gly Asn Gln Leu Phe Val
143 1 5
146 <210> SEQ ID NO: 13
147 <211> LENGTH: 9
148 <212> TYPE: PRT
149 <213> ORGANISM: Human papillomavirus type 16
151 <400> SEQUENCE: 13
152 Phe Tyr Asn Pro Asp Thr Gln Arg Leu
153 1 5
156 <210> SEQ ID NO: 14
157 <211> LENGTH: 9
158 <212> TYPE: PRT
159 <213> ORGANISM: Human papillomavirus type 16
161 <400> SEQUENCE: 14
162 Met His Gly Asp Thr Pro Thr Leu His
163 1 5
166 <210> SEQ ID NO: 15
167 <211> LENGTH: 8
168 <212> TYPE: PRT
169 <213> ORGANISM: Human papillomavirus type 16
171 <400> SEQUENCE: 15
172 Glu Thr Thr Asp Leu Tyr Cys Tyr
173 1 5
176 <210> SEQ ID NO: 16
177 <211> LENGTH: 10
178 <212> TYPE: PRT
179 <213> ORGANISM: Human papillomavirus type 16
181 <400> SEQUENCE: 16
182 Gln Ala Glu Pro Asp Arg Ala His Tyr Asn
183 1 5 10
186 <210> SEQ ID NO: 17
187 <211> LENGTH: 9
188 <212> TYPE: PRT
189 <213> ORGANISM: Human papillomavirus type 16
191 <400> SEQUENCE: 17
192 Ser Met Val Thr Ser Asp Ala Gln Ile
193 1 5
196 <210> SEQ ID NO: 18
197 <211> LENGTH: 9
198 <212> TYPE: PRT
199 <213> ORGANISM: Human papillomavirus type 16
201 <400> SEQUENCE: 18
202 Gly Ile Leu Gly Phe Val Phe Thr Leu
203 1 5
206 <210> SEQ ID NO: 19

```

RAW SEQUENCE LISTING

DATE: 10/24/2002

PATENT APPLICATION: US/09/980,177A

TIME: 15:57:28

Input Set : A:\50125.036001.SEQLIST.TXT

Output Set: N:\CRF4\10242002\I980177A.raw

```

207 <211> LENGTH: 10
208 <212> TYPE: PRT
209 <213> ORGANISM: Human papillomavirus type 16
211 <400> SEQUENCE: 19
212 Tyr Met Leu Asp Leu Gln Pro Glu Thr Thr
213 1 5 10
216 <210> SEQ ID NO: 20
217 <211> LENGTH: 9
218 <212> TYPE: PRT
219 <213> ORGANISM: Human papillomavirus type 16
221 <400> SEQUENCE: 20
222 Ser Met Asp Tyr Lys Gln Thr Gln Leu
223 1 5
226 <210> SEQ ID NO: 21
227 <211> LENGTH: 9
228 <212> TYPE: PRT
229 <213> ORGANISM: Human papillomavirus type 16
231 <400> SEQUENCE: 21
232 Thr Leu Glu Asp Thr Tyr Arg Phe Val
233 1 5
236 <210> SEQ ID NO: 22
237 <211> LENGTH: 9
238 <212> TYPE: PRT
239 <213> ORGANISM: Human papillomavirus type 16
241 <400> SEQUENCE: 22
242 Phe Gln Leu Cys Lys Ile Thr Leu Thr
243 1 5
246 <210> SEQ ID NO: 23
247 <211> LENGTH: 9
248 <212> TYPE: PRT
249 <213> ORGANISM: Human papillomavirus type 16
251 <400> SEQUENCE: 23
252 Lys Val Val Ser Thr Asp Glu Tyr Val
253 1 5
256 <210> SEQ ID NO: 24
257 <211> LENGTH: 9
258 <212> TYPE: PRT
259 <213> ORGANISM: Human papillomavirus type 16
261 <400> SEQUENCE: 24
262 Gln Leu Phe Val Thr Val Val Asp Thr
263 1 5
266 <210> SEQ ID NO: 25
267 <211> LENGTH: 9
268 <212> TYPE: PRT
269 <213> ORGANISM: Human papillomavirus type 16
271 <400> SEQUENCE: 25
272 Gly Leu Gln Tyr Arg Val Phe Arg Ile
273 1 5
276 <210> SEQ ID NO: 26

```

RAW SEQUENCE LISTING

DATE: 10/24/2002

PATENT APPLICATION: US/09/980,177A

TIME: 15:57:28

Input Set : A:\50125.036001.SEQLIST.TXT

Output Set: N:\CRF4\10242002\I980177A.raw

```

277 <211> LENGTH: 20
278 <212> TYPE: PRT
279 <213> ORGANISM: Human papillomavirus type 16
281 <400> SEQUENCE: 26
282 Met Ser Leu Tyr Leu Pro Ser Glu Ala Thr Val Tyr Leu Pro Pro Val
283 1 5 10 15
284 Pro Val Ser Lys
285 20
288 <210> SEQ ID NO: 27
289 <211> LENGTH: 20
290 <212> TYPE: PRT
291 <213> ORGANISM: Human papillomavirus type 16
293 <400> SEQUENCE: 27
294 Tyr Leu Pro Pro Val Pro Val Ser Lys Val Val Ser Thr Asp Glu Tyr
295 1 5 10 15
296 Val Ala Arg Thr
297 20
300 <210> SEQ ID NO: 28
301 <211> LENGTH: 20
302 <212> TYPE: PRT
303 <213> ORGANISM: Human papillomavirus type 16
305 <400> SEQUENCE: 28
306 Ser Thr Asp Glu Tyr Val Ala Arg Thr Asn Ile Tyr Tyr His Ala Gly
307 1 5 10 15
308 Thr Ser Arg Leu
309 20
312 <210> SEQ ID NO: 29
313 <211> LENGTH: 20
314 <212> TYPE: PRT
315 <213> ORGANISM: Human papillomavirus type 16
317 <400> SEQUENCE: 29
318 Tyr Tyr His Ala Gly Thr Ser Arg Leu Leu Ala Val Gly His Pro Tyr
319 1 5 10 15
320 Phe Pro Ile Lys
321 20
324 <210> SEQ ID NO: 30
325 <211> LENGTH: 20
326 <212> TYPE: PRT
327 <213> ORGANISM: Human papillomavirus type 16
329 <400> SEQUENCE: 30
330 Val Gly His Pro Tyr Phe Pro Ile Lys Lys Pro Asn Asn Asn Lys Ile
331 1 5 10 15
332 Leu Val Pro Lys
333 20
336 <210> SEQ ID NO: 31
337 <211> LENGTH: 20
338 <212> TYPE: PRT
339 <213> ORGANISM: Human papillomavirus type 16
341 <400> SEQUENCE: 31

```

VERIFICATION SUMMARY

DATE: 10/24/2002

PATENT APPLICATION: US/09/980,177A

TIME: 15:57:29

Input Set : A:\50125.036001.SEQLIST.TXT

Output Set: N:\CRF4\10242002\I980177A.raw